Claims:

1. — 44. (Cancelled)

45. (Original) A method for controlling the proportions of carbon monoxide, hydrogen and methane in a syngas stream leaving a feedstock reformer, in which feedstock is introduced into time an elevated temperature reformer, said process comprising:

adjusting the contact time of the syngas at elevated temperatures in the reformer, and

adjusting the exit gas temperature of the syngas as it leaves the reformer, to achieve proportions of carbon monoxide, hydrogen and methane most closely approximate those desired given the intended use of the syngas.

46. (Original) The process of claim 45 which includes introducing said feedstock and superheated steam into the feedstock reformer at about 204° C. (400° F.);

adjusting said exit temperature of said syngas leaving said feedstock reformer to between about 8710 C. (1600 0 F.) and about 12040 C. (22000 F.);

adjusting said contact time of said syngas within said reformer within a range of from about 0.4 seconds to about 5.0 seconds.

47. (Original) The process of claim 46 in which said syngas exit temperature and contact time are adjusted to produce a syngas most optimally proportioned to produce lower alcohols, by adjusting said syngas exit temperature to from about 8980 C. (1650° F.) to about 9260 C. (17000 F.), and said contact time from about 1.0 seconds to about 3.0 seconds.

48. (Original) The process of claim 47 in which said contact time is adjusted to from about 1.4 seconds to about 2.0 seconds.

49. — 57. (Cancelled)